

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the matter of)	
)	
Office of Engineering and Technology)	
Seeks Comment on Petition from Continental)	ET Docket No. 05-247
Airlines for Declaratory Ruling regarding)	
whether certain Restrictions on Antenna)	
Installation are Permissible under the)	
Commission's)	
Over-The-Air Reception Devices (OTARD))	
Rules		

COMMENTS OF PARTNERS HEALTHCARE SYSTEM, INC.

Partners HealthCare System, Inc. wishes to thank the Commission's Office of Engineering and Technology for providing the opportunity to comment on the petition from Continental Airlines.

Partners HealthCare System, Inc. (Partners) was founded in 1994 by Brigham and Women's Hospital and Massachusetts General Hospital. Partners is an integrated health care system that offers patients a continuum of coordinated high-quality care. The system includes primary care and specialty physicians, the two founding academic medical centers, community and specialty hospitals, home health and long-term care services, and community health centers. In addition to its patient care mission, Partners is one of the nation's premier biomedical research organizations and a major teaching affiliate of Harvard Medical School. Partners is a non-profit organization supported in part by charitable contributions.

Due to its size and geographic scope, Partners rents and leases a significant amount of commercial office space in the Boston area, used for general business purposes, medical research, physician offices, and community health care clinics.

Because of the large amount of space Partners currently leases and the growing dependence of the healthcare industry upon the use of unlicensed wireless technologies, we are compelled to submit this filing in response to FCC's request for comments regarding ET Docket No. 05-247.

By allowing property owners to determine how unlicensed wireless devices can be used on their properties, we feel a declaratory ruling against Continental Airlines' petition for relief will have a spillover effect on the healthcare community. Partners is certain this would lead to a profound and negative impact upon our ability to provide quality healthcare in a timely manner while controlling the associated costs. Since Partners is not unique in its use of leased office space and unlicensed wireless technologies, we further feel our position can be reasonably extended to the situation of most other hospitals and healthcare facilities within the United States.

In its dispute with Continental Airlines (Continental), the Massachusetts Port Authority (Massport) contends Continental has installed an antenna for a fixed wireless "WiFi" hot spot and must instead connect their equipment to a central antenna system installed by Massport, ostensibly to reduce the possibility of interference.

Partners wishes to point out that requiring all WiFi devices to connect to a central antenna may not be possible. By FCC rule, the antennae on many unlicensed Part 15 wireless devices are to be permanently attached to the device and unable to be removed, specifically to reduce the possibility of interference by preventing connection of external antennae. In some cases, the desired design criteria of the wireless device itself prevent the attachment of an external antenna to the device. For example, many wireless access points and adapters used for computers, printers, personal digital assistants, etc. currently have this design. Partners is involved with industry efforts to develop unlicensed

wireless technologies for use in medical devices and systems. To ensure the reliability of these devices and systems, it is already recognized that the device manufacturers and end-users must be able to control the propagation of the RF signals. One commonly recognized method of doing this is to specify antennae with specific radiation pattern characteristics. In many cases it is desirable to build these antennae into the devices themselves in a manner that prevents damage, disconnection, or tampering with the device.

Allowing property owners to require any unlicensed wireless device on the property to be connected to a central antenna, or else their use discontinued, would essentially allow property owners to prohibit use of many devices all together, even when there are no claims of interference. The exemption from OTARD claimed by Massport could thus be extended to other non-WiFi wireless devices. For example, though most of the following are usually considered mobile technologies, each requires a fixed wireless antenna, designed to preclude connection to external antennae, in order to operate on a network in the same frequency range as Massport's WiFi system: Bluetooth headsets, Zigbee building automation sensors and controllers, RFID tags and readers, wireless VoIP phones, cordless phones, and other developing wireless technologies.

Further, desirable technologies that rely on wireless LANs could be adversely impacted. Partners is deeply concerned that necessary applications currently in use or under development such as Computerized Physician Order Entry (CPOE), electronic Medication Administration Records (eMAR), Positive Patient ID (PPID), wirelessly connected IV pumps, and others, will be adversely impacted should FCC side with Massport. Each of these emerging applications found in physician offices and outpatient clinics, often leased spaces, increases patient safety by decreasing the possibility of

surgical errors and misadministration of pharmaceuticals. They also require several different unlicensed wireless technologies and associated fixed wireless antennae to connect to our local area networks.

In those instances where connecting a fixed wireless device to an external antenna is possible, doing so may cause signals to propagate beyond desired areas resulting in decreased security and reliability for the network. Partners' current deployment strategy for wireless systems requires the use of low power and antennae suitable for containing the radio signal within the bounds of space controlled by Partners. This is done to ensure conformity to the government's Health Insurance Portability and Accountability Act (HIPAA) requirements by greatly reducing the possibility of interception of and intrusion into our wireless LANs. Our strategy also decreases the possibility of interference with signal sources normally outside the desired coverage range of the system. We feel any requirement that forces us to connect to antenna systems outside of our control would put our systems at risk by an entity with no incentive to protect our wireless networks.

Other than interference to their WiFi system, which seems to be nothing more than the presence of a competing WiFi signal in the localized vicinity of Continental's "President's Club," Massport has not specified the source, type, or severity of interference they claim to suffer to other devices or systems. Instead, Massport relies on the argument of the possibility of interference, not taking into account FCC rules for unlicensed devices that greatly minimize this possibility. Massport also does not explain how or why Continental's localized WiFi system would cause harmful interference to other devices or systems while Massport's widespread system would not.

By including the ban in its lease agreements, Massport unnecessarily declares all wireless technologies to be sources of interference without ever having examined them or

working with the leaser to explore the possibilities enabling them to work. Continental states in its petition to the Commission that it changed the operating parameters on its wireless device to resolve any interference issues, yet Massport continues to insist the device be removed from service. In doing so, Massport usurps the authority granted only to the Commission to require an operator to cease operation of an interfering device.

It should also be recognized that the presence of a competing WiFi signal does not necessarily preclude access to Massport's WiFi network. Any wireless user wishing to connect to Massport's WiFi network in lieu of Continental's network may do so by specifying the appropriate parameters in his wireless device. All instances of co-channel interference to WiFi investigated by Partners prior to our deployment of WiFi showed the necessity of coordinating frequency, power usage, and network identification parameters. In the multiple leased properties occupied by Partners, we have many neighboring businesses with WiFi installations. We have taken the proactive approach of coordinating use of frequencies and transmit power levels and making appropriate choices of wireless parameters to prevent interference between our unlicensed wireless networks. Should Massport decide to use these same techniques, their system could coexist with Continental's without problems.

Even if Massport is suffering interference to its WiFi system as a result of Continental's WiFi system, Massport must understand that under the existing Part 15 rules governing both systems, each "must accept any interference received, including interference that may cause undesired operation." For confirmation, Massport should have to look no further than the FCC-required label placed on each unlicensed wireless device or the device's manual.

In its motion for an extension to the comment time, Massport claims:

“A decision in the proceeding could potentially have an adverse long-range impact on Logan and other airports nationwide. Given the recent experience of the 800 MHz band where commercial operations eventually degraded the RF operating environment of important public safety communications systems, the Commission needs to fully understand the safety and other issues raised by the potential applicability of the Over-the-Air Reception Devices (“OTARD”) rules in the complex airport environment.”

Partners recognizes the complex nature of the airport environment. However, we also submit the airport environment is no more complex, and probably less so, than the modern hospital environment where we employ a full complement of FCC regulated services, devices, and systems across the electromagnetic spectrum, from the low frequency (LF) to the extremely high frequency (EHF) regions. In spite of our extensive use of RF technologies in close proximity to one another, we have experienced no instances of interference to, or from, our WiFi LANs operating in either the 2.4 GHz or 5 GHz bands. Based upon our experience, we believe interference from unlicensed WiFi devices can be successfully addressed with sound planning and management that does not require the use of central antennae or banning devices from use.

Partners agrees partially with Massport that an FCC decision “could potentially have an adverse long-range impact on Logan and other airports nationwide.” We believe the impact could extend far beyond the aviation industry and will not be one of interference protection, but on the ability to ban wireless technologies at will and without cause. Partners’ primary concern is the impact upon healthcare, but it is easy to see that such a decision could have a chilling effect on unlicensed wireless technologies as a whole. Exempting unlicensed fixed wireless devices from the protection offered by the OTARD rule as requested by Massport would unduly and unfairly burden renters and leasers of any property by creating the possibility of property owners requiring them to abandon the use of such technology. It would also put the Commission in the position of

creating a de jure blanket ban on Part 15 unlicensed wireless technologies to be enforced at the whim of property owners, or having to decide on an endless number of requests to allow or deny the use of current and new technologies still under development.

Partners HealthCare Systems respectfully and strongly urges the Commission to:

- Continue to allow Part 15 unlicensed wireless devices to be used with the existing levels of interference protection afforded by current rules;
- Continue exerting the Commission's exclusive domain and power in resolving interference issues, and;
- Rule in favor of Continental Airlines' petition for relief.

Respectfully submitted,

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